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easily reached from Narragansett Pier or Watch Hill, to all collectors who come to the Plantations. W. W. BAILEY.

Providence, R. I., Sept. 10, 1880.

§ 80. **Botanical News.**—The *Botanisches Centralblatt* is the title of a new weekly journal published under the editorship of Dr. O. Uhlworm, of Leipzig. The object of the publication is to supply brief abstracts in each issue of every important new independent paper in a scientific journal, in all branches of botanical science; a complete index to titles of recent botanical literature in all countries; brief original communications; reports of museums, gardens, botanical explorations, etc.; personal news, etc. Dr. Uhlworm has secured the co-operation of correspondents in the various towns of Germany, France, England, Switzerland, Sweden, Denmark, Greece, Russia, Holland, etc., and invites the further assistance of botanists in all countries to render the *Centralblatt* as complete and useful as possible. The Editor's address is Südstrasse, 82, Leipzig.

Trimen's *Journal of Botany* for July contains: Enumeratio Acanthacearum Herbarii Welwitschiani Angolensis, by S. LeM. Moore; Cardamine pratensis and its Segregates, by G. Nicholson; On Lattakia Tobacco, by W. T. Thiselton Dyer; Botany of the British Polar Expedition, by H. C. Hart; and On a Collection of Ferns made by Dr. Beccari in Sumatra, by J. G. Baker.

In the *Botanical Gazette* for July, Mr. Meehan discusses the vitality of pine seeds; Dr. Gray calls attention to the proterandry of *Eremurus robustus;* Prof W. W. Bailey records a case of albinism in *Arethusa bulbosa;* Mr. L. H. Bailey gives a short list of Michigan Lake shore-plants; and another writer notes the occurence of six fungi on *Anemone nemorosa.* The Editor of the *Gazette* announces his intention of closing his sanctum for two months, and of partaking of a luxury seldom accorded to journalists—that of a vacation.

Origin of Flowers through Insect Selection.—Not long since, Dr. Herman Müller, it will be remembered, published a work in which he endeavors to explain the existing variations in the forms of flowers on the principle of "selection." His supposition is that insects of different tastes breed peculiar flowers just as men breed peculiar races of cattle. Carrion-loving insects breed their kind of flowers; long-tongued insects the tubular kinds; and many other classes of insects have each bred the flowers they love best. Dr. Müller has a note in *Nature* of July 8th, in which he points out that the European *Saxifraga umbrosa* has been adorned with its present brilliant colors through selection by dipterous insects of the family Syrphidae. He says:

"Among Diptera the most assiduous visitors of flowers are certain Syrphidae, which, elegantly colored themselves, are fond of splendid flower-colors, and, before eating pollen or sucking nectar, like to stop awhile, hovering free in the air, in front of their favorites, apparently fascinated, or at least delighted, by the brilliancy of their colors. Thus I repeatedly observed *Syrphus balteatus* hovering before the flowers of *Verbascum nigrum*, and often before *Melanostoma mellina;* *Ascia podagrica* before *Veronica chamaedrys;* and in the Alps the lank *Sphegina clunipes* before *Saxifraga rotundifolia* and in my garden *Ascia podagrica* before *Saxifraga umbrosa.*

Of *Verbascum nigrum* the main fertilizers are humble-bees, Diptera co-operating only in a subordinate degree; in the case of the three other species, on the contrary, the above-named Syrphidae are such frequent visitors and cross-fertilizers that we may safely conclude that it is by their selection of elegantly-colored varieties that these flowers have acquired their beautiful peculiarity. Hence, in order to estimate the color-sense of these Syrphidae, it is worth while to consider what color-combinations they have been able to produce by their selection.

Saxifraga umbrosa being, as far as hitherto known, their finest masterpiece, we may in the first place look at the variegated decoration of this species. Its snow-white petals are adorned with colored spots, which in size and intensity of light gradually decrease from the base of the petals towards their extremity. Indeed, nearest to their base, within the first third of their length, there is a large irregular spot of an intense yellow ; about the middle of their length there follows a narrower cross band of red color, vermilion towards the base, intensely pink towards the outside, not reaching the margins of the petals, sometimes dissolved into several separate spots ; lastly, beyond the middle of the length of the petals there are three to eight smaller roundish spots of a paler violet-pink color.

The flowers of *Veronica chamaedrys* prove that also gay blue colors are perceived and selected by Ascia.

On some Impurities of Drinking-Water.—Under this title, Prof. W. G. Farlow has recently sent us a pamphlet recording the results of his investigations, extending over several years, as to the causes of the " pig-pen " odor which occasionally makes its appearance in water stored up for the use of cities. The subject is discussed in a popular form, and from strictly a botanical point of view. Prof. Farlow has traced the cause of the odor in question to the putrefaction of algae belonging to the order *Phycochromaceae.* This order contains certain genera, three at least of which have been found in decay to cause disagreeable conditions of drinking-water; these genera being *Clathrocystis*, *Caelosphaerium* and *Anabaena.* So far as known, the so-called " cucumber taste," which also sometimes makes its appearance in drinking-water, is not due to the growth or decay of any species of plant; nor can any cause—botanical, zoölogical, or chemical be assigned for it. A perusal of Prof. Farlow's paper will serve to allay the fear of those who see in every minute alga floating in water the germs of disease.

The August number of the *Phrenological Journal*, received July 20th, contains a portrait of the late Charles C. Frost, accompanied by a biographical sketch from materials furnished by Rev. Lucius Holmes.

To the *American Monthly Microscophical Journal* Dr. Wolle contributes another note on fresh-water algae ; the subject treated is the genus *Bulbochaete*, and figures of six species illustrate the text.

§ 81. **Erratum.**—In Mr. Ellis's description of a new *Sphaeria*, p. 90, 6 lines from the bottom of the page, strike out the comma after the word "*sporidias.*" Although Mr. Ellis's communication is dated May 26th, it was not received by us till the latter part of July.